

NC WATER QUALITY STANDARDS
ATTAINING CHLOROPHYLL-A
IN A PIEDMONT RESERVOIR:
...
IS IT THE IMPOSSIBLE DREAM?

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THE REALITY

- Before Falls Lake Dam construction, the State raised concerns for biologically productive conditions.
- Falls Lake has the most stringent nutrient management rules of any Piedmont reservoir.
- With Stage I Rules implemented, Falls Lake has remained stable despite significant population growth in the basin.
- Falls Lake is meeting all designated uses for recreation, fishing, water supply and flood control. Falls lake's designated uses are not "impaired" but the chlorophyll-a criteria is not attained.

GREEK MYTHOLOGY AND THE IMPOSSIBLE WQS



Sisyphus was condemned to repeat the same meaningless task of pushing a boulder up a mountain, only to see it roll down again.

ADJUSTING THE FOCUS ON THE UNREACHABLE STAR?

- The 303(d) method to determine compliance with the chlorophyll-*a* WQS uses instantaneous sampling instead of a time frame reflective of lake processes.
- The 303(d) method to determine compliance with the chlorophyll-*a* WQS should be adopted as a rule in accordance with the Administrative Procedure Act.
- UNRBA Modeling - reforestation of all lands in the Falls drainage basin (except impoundments) will not achieve the application of the current chlorophyll-*a* WQS.
- Site-specific WQS can consider these obstacles.

NC SITE-SPECIFIC WQS STATUTE NCGS § 143-214.3

Factors for setting water quality standard for a specific stream segment include:

- Irretrievable and uncontrollable man-induced conditions preclude the attainment of the applicable water quality standards; or
- ...adverse social and economic impact, disproportionate to the benefits to the public health, safety or welfare as a result of maintaining the [otherwise applicable] standards;
- ...no reasonable relationship between the cost to the petitioner of achieving the effluent limitations necessary to comply with applicable water quality standards to the benefits;

https://www.ncleg.gov/EnactedLegislation/Statutes/PDF/BySection/Chapter_143/GS_143-214.3.pdf

IS A MORE STABLE APPROACH THE RIGHT WAY TO APPROACH THE QUEST?

- The Clean Water Act was amended in 2019 to authorize the use of Integrated Planning for wastewater and stormwater.
- Long-term planning of watersheds in other states provides a means to balance priorities, cost-effectiveness, and multiple CWA requirements.
- NC Gen. Stat. §143-214.14 provides an opportunity to allow for long-term planning by the UNRBA as a coalition and to set realistic goals for maintenance and improvement of WQ in Falls Lake.
- Cost of new programs like Emerging Chemicals can be added to the Water Quality Protection Plan.

INTEGRATED PLANNING

- EPA policy from 2012 approved integrated planning to allow staggered compliance with NPDES permits. Added to the Clean Water Act in 2019. See 33 U.S.C. 1342(s)
- Program allows local government to establish a single plan to addressing multiple NPDES permits.
- Authorizes compliance schedules over more than 1 permit term with periodic review of the schedule.
- Atlanta's integrated plan focuses on Green Infrastructure.
- Burlington, VT integrated plan is for phosphorous reduction and extends from 2021 to 2040.

https://www.epa.gov/system/files/documents/2021-12/ip-facsheet_thebasics-2.pdf

WATERSHED PLANNING

- EPA watershed planning focused on nonpoint sources.
- In Northern Kentucky, Sanitation District #1 combined watershed planning with integrated planning. The program resulted from a 2007 Consent Decree. The plan addresses point source combined sewer overflows, sanitary sewer overflows, and other non-point sources contributing to stream degraded water quality.
- April 5, 2022 Memorandum from EPA Asst Administrator Radhika Fox “Accelerating Nutrient Pollution Reductions in the Nation’s Waters”.

<https://www.epa.gov/nps/resources-watershed-planning>

KEY ELEMENTS OF COMPREHENSIVE PLAN

- Proposed strategies for achieving the specified goals and objectives; a detailed implementation strategy, implementation responsibilities of State and local agencies.
- Performance indicators and benchmarks to measure progress in achieving the specified goals and objectives, and an associated monitoring framework.
- A coalition plan covers a specified period; may provide for phasing in specific strategies, tasks, or mechanisms by specified dates; may include successive coalition plan periods; may include strategies for subareas or jurisdictions of the geographic area covered by the coalition plan.

COOPERATIVE STATE-LOCAL COALITION WATER QUALITY PROTECTION PLANS. NCGS 143-214.14

- This statute established to address “surface water impoundments or other means may have a significant effect on water quality” where standard requirements are not equitable and local governments are willing to develop “distinct approaches” in the basin alternated plan.
- “It is the goal of the General Assembly that, . . . the State shall adopt water quality protection requirements that are proportional to the relative contributions of pollution from all sources in terms of both the loading and proximity of those sources. ‘

https://www.ncleg.gov/EnactedLegislation/Statutes/PDF/BySection/Chapter_143/GS_143-214.14.pdf

PROPOSED CHANGES TO NC GEN. STAT. §143-214.14

- Protect coalition members from enforcement actions if compliant with WQPP (Water Quality Protection Plan).
- Require NPDES point source and non-point source permits be consistent with schedule in WQPP.
- Require WQPP attainment of 5-year plan increments if date of attainment is 20 years or more.
- Authorize approval of 5-year incremental plans by DEQ unless coalition objects. Final approval by EMC to resolve objections.
- Require notice and comment before EMC action on proposed WQPP.

PROPOSED CHANGES TO
NC GEN. STAT. §143-214.14 (P 2)

- Clarify that WQPPs are not rules.
- Failure to abide by WQPP allows enforcement by DEQ.
- Require methodology for determining attainment be in the approved WQPP when WQPP implements a site-specific WQS.
- Authorize coalition members to require stormwater control for full parcels being redeveloped, notwithstanding NC Gen. Stat. §143-214.7, when approved WQPP relies on such reductions.

PATHWAY TO THE UNREACHABLE STAR ?

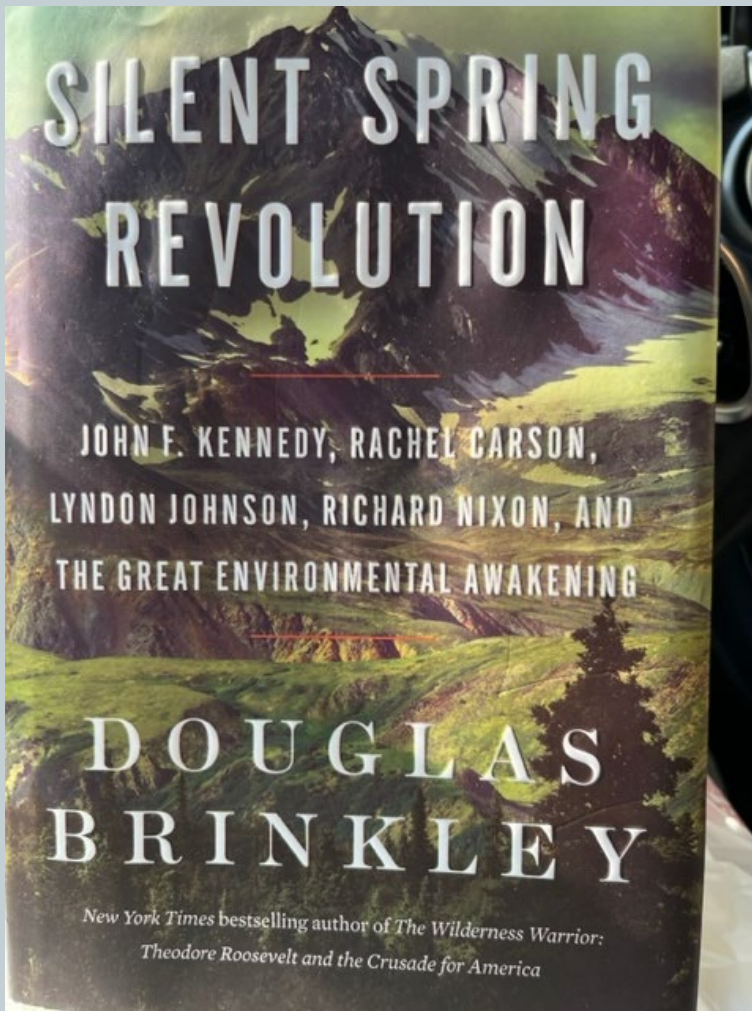
- The 303(d) listing drives the Falls rules but there is no known impairment of the designated uses of the lake.
No evidence of recreation, aquatic life, or water supply problems. No algal toxin levels exceeding criteria.
- A site-specific WQS can address the reason for the present impairment finding.
- Falls Lake will always need a nutrient loading control program, at least as effective as Stage I of the Falls rules.
- Emerging chemicals control program has potential for significant, additional new costs to utilities.
- A long-term strategy to manage and protect the watershed allows costs of the program to be spread over multiple permit cycles.

THE FIRST PRESIDENT TO CALL OUT
NUTRIENT PROBLEMS TO CONGRESS?

“The technology of water treatment must be improved. We must find ways to allow more ‘re-use’ of waste water at reasonable costs. We must remove or control nutrients that cause excessive growth of plant life in streams, lakes, and estuaries. We must take steps to control the damage caused by waters that ‘heat-up’ after cooling generators and industrial engines.”

President Lyndon B. Johnson, February 8, 1965.

Special Message to the Congress Transmitting Report on the National Wilderness Preservation System.



HISTORY OF
ENVIRONMENTAL
POLICY AND LAWS
1952-1974